



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,172	06/12/2001	Ulrich Muller	MULL 101	6526

7590 12/28/2005  
Gary W McFarron  
Cook Alex McFarron Manzo Cummings & Mehler  
Suite 2850  
200 West Adams Street  
Chicago, IL 60606

EXAMINER

DESIRE, GREGORY M

ART UNIT PAPER NUMBER

2627

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/787,172	Applicant(s) MULLER ET AL.	
	Examiner Gregory M. Desire	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to communication filed 9/28/05.

### ***Response to Amendment***

2. The examiner acknowledges the substitute specification. Examiner acknowledges the cancellation of claims 1-13 and the submission of new claims 14-23. The new claims do not overcome the prior art in the rejection filed 3/7/05. Therefore examiner maintains prior art found in the previous action.

### ***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bullock et al (5,488,478) in view of Kuhn et al (5,592,246).

Regarding method claim 14 Bullock discloses,

Measuring the geometry and surface unevenness of a moving metal strip (which reads on measuring the shape and surface flatness of steel strip of col. 1 lines 30-32 and col. 2 lines 38-40 cites the strip as a moving strip) by producing a pattern on the

Art Unit: 2627

surface to be measured (which reads on producing on the object surface a plurality of light patterns on col. 1 line 39), using a light source (note fig. 1 block 3 in connection with col. 3 lines 13-16, laser light source) and a camera (note fig. 1 block 5 in connection col. col. 2 lines 44-45, line scan camera) characterized in that the pattern is produced on the surface 4 (note col. 2 lines 40-44, surface of the strip).

Bullock teaches using different light sources for projection. However Bullock is silent wherein the projection is with the aid of a transparency. Kuhn discloses pattern produced to be measured by projection with the aid of transparency (note col. 3 lines 33-40, Kuhn teaches liquid crystal create a pattern of light and dark areas of light source which read on transparency). Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use a light source which projects with the aid of transparency in the system of Bullock as evidence by Kuhn. Creating a pattern of light and dark areas of light source would be a desirable feature in the art of three-dimensional mapping surface allowing any frequency of the electromagnetic spectrum to be contemplated (note col. 3 lines 38-40, Kuhn) and Kuhn recognizes that improved accuracy would be expected when the aid of transparency of Kuhn is included in the system of Bullock.

Regarding method claim 15 Bullock and Kuhn discloses,

The pattern is produced with aid of liquid crystal device (note Kuhn col. 3 lines 33-34, pattern generator produce pattern with liquid crystal device).

Regarding method claims 16 and 20 Bullock and Kuhn discloses

Elastic form changes are filtered using the initially detected peaks and the peaks and the peaks are separated according to different frequencies and wavelength on account to strip movement (Examiner interprets to the best of his knowledge, the claims discloses, wherein a signal is filtered note Bullock col. 4 lines 51-53).

Regarding method claims 17 and 21 Bullock and Kuhn discloses,

The use of the edge boundary of the strip (examiner interprets edge reading as edge boundary of the strip, note Bullock col. 4 lines 49-50)

Regarding method claims 18 and 22 Bullock and Kuhn discloses,

The strip width or cut length is determined from the edge boundary (note Bullock col. 2 lines 57-64 and col. 4 lines 52-61, height or length of strip is determined from edge readings).

Regarding method claims 19 and 23 Bullock and Kuhn discloses,

Computational generation of a reference plane (note Bullock, col. 2 lines 40-43, examiner interprets projected light pattern onto the surface forming a light pattern as generation of reference plane) and of a reference phase image from the geometry of the knowing measuring device elements (note Bullock col. 2 lines 45-50 and 59-61, processed pattern must consider angle of projection examiner interprets as reference phase image).

***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (571) 272-7449. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory M. Desire  
Examiner  
Art Unit 2627

G.D.  
December 22, 2005

A handwritten signature in black ink, appearing to read 'Sanjiv Shah', with a stylized flourish at the end.

SANJIV SHAH  
PRIMARY EXAMINER